# LIVE AND ELECTRONIC WAGERING AND LOTTERY GAME

## Cross Reference to Related Application

5    This application is a continuation-in-part application of commonly owned

application Ser. No.: 60/229,665 filed August 31, 2000 and titled "Live and

Electronic Wagering and Lottery Game".

## Field of the Invention

The present invention relates to a live and electronic wagering or lottery

10    game where an inventory of game symbols are arranged in a random order and

distributed for define an outcome for the game.

## Background

Wagering or casino or lottery games are typically referred to as live games

or electronic games.  Live games are those such as Poker, Blackjack, Roulette

15    and the like.  Electronic games includes games such as video Poker and electro-

mechanical and video based slot machines.  For electronic games, a player inputs

a wager which can be money, tokens or fictitious credits.  Operation of the device

produces an outcomes, which can be a winning or a losing outcome.  For video

Poker, virtual cards are dealt and the player, by holding and discarding cards

20    attempts to construct a winning hand combination.  For each hand of play, the

cards are randomly selected from what may be deemed to be a full deck cards by

a random number generator.  That is, as hands are sequentially played, the virtual

deck is not depleted of the cards that have already been played. After each hand, the game proceeds as though it were being dealt from a freshly shuffled deck.

For slot machines, symbols are randomly selected and presented along one or more pay lines. The combinations of symbols at an enabled pay line determines whether the player has obtained a winning or a losing outcome.

For live games such as Blackjack, cards are dealt from a deck or from a shoe containing multiple decks to players. The players assemble a final hand of cards which is the outcome. In Blackjack the final hand is the sum of the values of the cards according to the well known rules of the game. As hands are dealt the deck or shoe is depleted to a point where the cards are reshuffled. Players can keep track of the cards played and thus know which cards remain in the deck or shoe. This may give them an advantage.

There is a need for a game which has the excitement of a slot machine as well as the anticipation accompanying the deal of cards. There is also the need for a game where the inventory of symbols is depleted as hands are played, like a deck of cards, until the inventory needs to be re-shuffled. There is also a need for an electronic game which permits the player to, after any hand, order re-shuffling of the symbol inventory. There is further a need for an electronic game where the remaining inventory of symbols for play can be displayed for the player to see.

## Summary of the Invention

There is, therefore, set forth according to the present invention a method and device for a game which randomly arranges game symbols into a serial ordered inventory and displays the same in sequence to define one or more outcomes. A display displays the constituency of the inventory as symbols are depleted from the inventory during play. At a prompt by the player or at substantially a predetermined point of exhaustion of the inventory, the inventory is re-constituted and re-shuffled into a random serial order.

The method includes configuring the game inventory indicia into a random, serial order. The player makes wagers and plays each of a series of hands. For each hand of play a predetermined number of game indicia are revealed to define an outcome, said indicia selected in order from the serially arranged inventory. The method further includes displaying the constituency of the inventory depleted of said revealed indica for each hand as well as issuing an award to a player obtaining one of a plurality of preselected winning indicia combinations.

The device for playing the game includes a processor, said processor configured to include means for randomly arranging an inventory of game symbols or indicia into a serial order and a video display. Means are provided for a player to make a wager and prompt play of the game. The processor, in response to prompting of play, is configured to select and display at said display a predetermined number of indicia selected in order from said arranged inventory to define an outcome. The processor is configured to compare said outcome to

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a schedule of winning outcomes stored in a data structure and to issue an award for a winning combination. Further, the processor is configured to display the constituency of the remaining symbol inventory.

## Brief Description of the Drawings

5    These and other features and advantages will become appreciated as the same becomes better understood with reference to the description claims and drawings wherein:

FIG. 1 shows a layout for a screen display for the electronic version before play;

10    FIG. 2 shows a layout for the screen display for the electronic version after the deal of cards;

FIG. 3 A - D show representations of cards for play of the game; and

FIG. 4 shows a display for another version of the electronic game.

## Description

15    Turning to FIG. 1, a layout 10 for the game according to the present invention is shown for play as displayed for the electronic version of the game. According to this embodiment, the display includes three areas 12a - c which, as described below, receive game cards as dealt to produce an outcome for the game. The display may also show a pay schedule 14 as well as a credit meter 

20    16 which reflects the number of credits are available for wagering , the amount wagered on a hand of play and the amount won. There also may be provided various buttons embodied as buttons on the machine or as areas on the display

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touch screen. These buttons include a help button 18 for the player to receive assistance concerning play, a cash out button 20 to cash out accumulated credits, a bet one credit button 22, max bet button 24 and play button 26. Also provided according to the present invention is a shuffle button 28 the purposes of which will

5     hereinafter become evident.

To play the device, the player makes a wager by inserting coins or tokens or by depressing the bet one credit button 22 or max bet button 24. The placing of a maximum bet will automatically prompt play of the hand, otherwise the player must depress the play button 26 to start play. Upon the start of play, the

10    processor for the machine, from stored data representing an ordered deck or inventory of game cards, selects and displays in areas 12a - c three cards. The game cards certain game cards are as illustrated in FIG. 3A - D. Preferably the virtual deck includes sixty three game cards according to the following distribution:

Distribution of Game Cards

| Symbol | Number in deck |
|---|---|
| "BAR" | 15 |
| "BAR - BAR" | 9 |
| "BAR-BAR-BAR" | 7 |
| Red "7" | 5 |
| Blue "7" | 3 |
| Blank | <u>24</u> |
| Total | 63 |

The three cards as selected and displayed represent the outcome for the

25    game. The player wins a pay back based preferably based upon the following pay schedule.

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## Pay Schedule

| Units Bet | 1 | 2 | 3 |
|---|---|---|---|
| 3 Blue 7s | 2000 | 4000 | 6000 |
| 3 Red 7s | 300 | 600 | 900 |
| Mixed 7s | 50 | 100 | 150 |
| 3 BAR-BAR-BAR | 50 | 100 | 150 |
| 3 BAR-BAR | 20 | 40 | 60 |
| 3 BAR | 10 | 20 | 30 |
| Mixed BARs | 5 | 10 | 15 |
| 3 Blanks | 1 | 2 | 3 |

Other pay schedules, symbols and distributions of symbols can be adopted.

As shown in FIG. 2, the player has not obtained a winning combination since the combination is "7", "BAR-BAR" and "BAR". Thus the player would lose their wager.

To play the next hand, the player inputs another wager and prompts play whereupon the processor would select and display the next three symbols in the ordered data structure representing the deck of game cards.

It should be noted that the data structure of game cards is stored in serial order as determined by a virtual shuffle of game cards. For example, the processor for the game randomly arranges the cards in a serail order 1 -X, where, for the game described herein, X equals 63. As hands are played one after another, the game cards are selected and displayed in the serial order in which they are positioned in the deck. For the first hand cards in positions 1 -3 would be displayed and removed from the arranged deck. For the next hand the cards would be selected from positions 4-6 and so forth until the deck is depleted or reaches a predetermined location in the arrangement proximate the X card. The

serial play of hands thus depletes the virtual deck of cards in serial order which have been selected. When the deck is depleted to, for example, three remaining game cards, the processor reshuffles the deck and places the cards in a new, random serial order. By random serial order what is meant is that, like an actual deck, the cards would be randomized and placed in the 1-X order.

A feature of the present invention is that prior to entering a wager, the player can depress the help button 18 which controls the game processor to display at a deck balance area 30 the constituency of the cards remaining in the deck. For example, if forty cards have been dealt for preceding hands, the balance area would display, for the remaining twenty-three cards, how many Blanks, BARs, BAR-BARs, and 7s remain in the deck. If, for example, all of the Blue 7s have been played thus depriving the player of the ability to have a 3 Blue 7s outcome, the player can depress the shuffle button 28 and the processor will reshuffle and randomize the deck. The ability to see the balance of the deck remaining for play may lead the player to increase their wagers based upon the perception that the probabilities for obtaining a favorable outcome are increased. Further, the ability to reshuffle will also convince the player that the game is fair.

The game can be played with a single virtual deck or multiple decks. Further the game can be played as a video lottery where it is guaranteed that in any particular cycle of hands, that each series of prizes will be awarded. For example, if the cycle is selected as 238,266 hands, the pay outs and frequencies are as set forth below:

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238,266 Hands in Cycle

| Symbols | Hits | Payout | Max Bet Total Payout |
|---|---|---|---|
| Blue 7s | 6 | 6000 | 36,000 |
| Red 7s | 60 | 900 | 54,000 |
| Mixed 7s | 270 | 150 | 40,500 |
| 3 BARs | 210 | 150 | 31,500 |
| 2 BARs | 504 | 60 | 30,240 |
| 1 BAR | 2730 | 30 | 81,900 |
| Mixed BARs | 23,536 | 15 | 352,890 |
| Blanks | 12,144 | 3 | 36,432 |
| | 39,450 | | 663,462 |

Total Play:        714,748
Total Payout:     -663,462
Total Hold        51,336 (7.18%)
Hit Ratio: 1 in 6.04 hands

Thus, it is seen that for a lottery based game, the game presents a 26.95% hold. This hold can be increased or decreased by altering the pays for one or more winning combinations or by adding more winning combinations.

For a table game version, a table is provided much like a Blackjack table having, for example, six player positions. At each player position there is provided the areas 12a -c for the players game cards. Each player makes a wager, the minimums and maximums of which may be dictated by house rules. After each player has made their desired wager, a dealer from a single deck of shuffled game cards or a shoe containing multiple, e.g. four, shuffled decks, deals three game cards to each of the player's areas 12 a- c. Depending upon the combination of cards, as discussed above, the player wins or loses. After paying each winning player and collecting losing wagers, the players make new wagers and new hands are dealt.

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Before the start of dealing from a newly shuffled deck the dealer may discard, i.e. burn, three cards. Alternatively, the dealer may deal until there are at least three cards left in the deck, and then reshuffle. Dealing from the deck or shoe continues until reshuffling is warranted by there being insufficient cards left in the deck to deal hands of three cards to each player.

For the electronic version of the game, the players have the benefit of having displayed the deck balance and ordering reshuffling.

Turning to FIG. 4 is a further version of the electronic game. In FIG. 4 there is shown and electronic game display 100 controlled by a computer processor 101 to define a three-by-three matrix 102 in the form of a three reel slot machine. Thus the matrix 102 shows three reels 104a-c each having three rows for the display of selected game symbols. The matrix 102 also defines a plurality of pay lines 106a-h, shown as seven which embrace the horizontal rows, reels 104a-c and diagonals. As hereinafter described, game indicia are displayed in the matrix 102 to define, an outcome for each pay line 106a-h.

The processor also controls the display 100 to display other features for the game. At 108 the display 100 shows the total win for the game or spin whereas at 110 the total amount of credits for gaming are displayed. The total being wagered for the last game which resulted in a win or loss is displayed at 112. For a current game, before the spin, the total game wager is displayed at 114.

In regards to game wagers, each pay line 106a-h includes a banner 116 to indicate the amount being wagered on each pay line 106a-h. For example, if the

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game limits wagers to three per pay line, each banner 116 would show "3" and the total game wager would be displayed at 114 as "24" (3 X 8 pay lines).

The display 100 also, according to the present invention, displays at 118 the inventory of symbols remaining for play. For example, where here are 63 symbols, after the initial shuffle, the inventory of display would display the following:

| Symbols Remaining | |
| --- | --- |
| Blue 7s | 3 |
| Red 7s | 5 |
| 3Bars | 7 |
| 2Bars | 9 |
| Bar | 15 |
| Blanks | 24 |
| Total | 63 |

As hands or games are played, the inventory display 118 would be depleted based upon the depletion of the symbols from the serial inventory. For example, and with reference to FIG. 4, the inventory would be now shown to be the following (all 7s in FIG. 4 assumed to be Red 7s):

| Symbols Remaining | |
| --- | --- |
| Blue 7s | 3 |
| Red 7s | 2 |
| 3Bars | 7 |
| 2Bars | 8 |
| Bar | 10 |
| Blanks | 24 |

Thus as games are played the player can assess the constituency of the remaining inventory. This feature may alter the wagering decisions of the player, e.g. to increase or decrease the wagers.

In the event the player is dissatisfied with the remaining constituency of the inventory, the player can order the inventory to be re-shuffled by, for example, touching a touch screen button 120. For re-shuffling the inventory is returned to its full symbol inventory, e.g. 63 symbols, and the symbols are randomly shuffled

5     and placed in the serial order. Further the inventory display 118 shows a new inventory.

The display 100, which again may be a touch screen display, includes other features. At 122 a button is presented touching of which applies a maximum wager to the game, e.g. 24 units. The wager, as with all wagers. depletes the

10     credit inventory displayed at 110. A help button 124 controls the game processor to display game information to the player. Finally, at 126 there is a deal button 126 which prompts play of a hand.

At 128 the display 100 shows a pay table for winning pay line combinations. The winning combinations would be preselected and stored in a data structure for

15     the processor 101.

|  | Pay Table | | |
|---|---|---|---|
| **Wager** | **1** | **2** | **3** |
| Blue 7s | 3000 | 6000 | 9000 |
| Red 7s | 300 | 600 | 900 |
| Any 7s | 50 | 100 | 150 |
| 3Bars | 50 | 100 | 150 |
| 2Bars | 20 | 40 | 60 |
| Bar | 10 | 20 | 30 |
| Any Bar | 5 | 10 | 15 |
| Blanks | 1 | 2 | 3 |

To play the game of FIG. 4, the player wagers on one or more pay lines 106a-h. For purposes of this description it shall be assumed that the player has

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depressed the maximum wager button 122 to wager 3 units on each pay line 106a-h. The processor is prompted to select nine symbols from the beginning of the serial, random inventory and displays the same in the rows and columns of the game matrix 102 as shown. Based upon the symbols selected and displayed the player has obtained certain winning outcomes as tabulated below (all 7s are Red 7s):

| Pay line | Award |
| --- | --- |
| 106a | 30 (Three "Bars") |
| 106e | 15 (Three Any "Bar") |
| Total win | 45 |

The award is displayed at 108 and may be issued at 130 in the form of credits, tokens, printed ticket or as otherwise known in the art.

The inventory display 118 would show the displayed symbols removed from the inventory as tabulated above. The player would enter wagers to play the next game. Based upon the displayed inventory, the player may choose before any play to re-shuffle and re-constitute the inventory by touching the re-shuffle button 120. For example, if all of the Red and Blues 7s have been depleted from the inventory, the player would re-shuffle so that the higher award pay outs would be possible.

According to a further embodiment, the game may include "Wild"symbols which are wild to complete any winning outcome. Further the game symbols may

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be representations of playing cards. The displayed, fully constituted inventory would be, for example, as follows:

| Symbol | Number |
|--------|--------|
| Wild | 4 |
| Kings | 5 |
| Queens | 6 |
| Jacks | 8 |
| 10s | 10 |
| Blanks | 30 |
| Total | 63 |

Further the pay table for the game may be as follows:

Pay Table

| Wager | 1 | 2 | 3 |
|-------|-----|------|------|
| Wilds | 800 | 1500 | 2500 |
| Kings | 100 | 200 | 300 |
| Queens | 50 | 100 | 150 |
| Jacks | 20 | 40 | 60 |
| 10s | 10 | 20 | 30 |
| Any Bar | 5 | 10 | 15 |
| Blanks | 1 | 2 | 3 |

Thus the game may use any suitable symbols. Further the game matrix 102 may be expanded to four, five or more reels and may include more or less pay lines.

The game can also be played as a live game where the indicia are put on cards which are dealt to each player from the deck including the card distribution as set forth above. Each player makes a wager and is dealt three cards from the deck which define the outcome. At a predetermined point of penetration into the deck, e.g. 5 rounds of play, the deck is reconstituted and re-shuffled. The player,

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based upon the known distribution of symbols, may also be permitted to order

reconstituting and re-shuffling of the deck for the next hand.

While I have shown and described certain embodiments of the present

invention, it should be understood that it is subject to many modifications and

5    changes without departing from the spirit and scope of the appended claims.